

REMARKS

Claims 1-22 were originally filed in the present application. Claims 21 and 22 are currently cancelled without prejudice or disclaimer, and new claims 23 and 24 are currently added. Accordingly, claims 1-20, 23 and 24 are currently pending in the present application.

Reconsideration of this application in light of the above amendments and the following remarks is requested.

Rejections under 35 U.S.C. §102: Odashima

Claim 1

Claim 1 recites:

1. A method of manufacturing a microelectronic package, comprising:
 - coupling a device substrate to the a package substrate;
 - assembling a bifurcated mold around the device and package substrates, the bifurcated mold including a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate; and
 - encapsulating the device and package substrates employing the bifurcated mold.

Claim 1 was rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,998,243 to Odashima, et al. ("Odashima").

The PTO provides in MPEP §2131 that:

"[t]o anticipate a claim, the reference must teach every element of the claim...."

Therefore, to sustain the §102 rejection with respect to claim 1, Odashima must contain all of the elements of claim 1. However, Odashima does not disclose assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate, as recited in claim 1, among other elements.

Therefore, the §102 rejection of claim 1 is not supported by Odashima. Accordingly, Applicants respectfully request the Examiner withdraw the rejection.

Claim 11

Claim 11 recites

11. A bifurcated microelectronic package assembly tool, comprising:
a base configured to fix an orientation of a package substrate;
a body configured to house a device substrate coupled to the package substrate; and
a first seal coupled to the base and a second seal coupled to the body, wherein the second seal is configured to contact the first seal and the package substrate when the device and package substrates are coupled together and oriented within the base and the body.

Claim 11 was also rejected under 35 U.S.C. §102(b) as being anticipated by Odashima. Thus, to sustain this rejection, Odashima must contain all of the elements of claim 11. However, Odashima does not disclose a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, in the context of claim 11, among other elements of claim 11.

Therefore, the §102 rejection of claim 11 is not supported by Odashima. Accordingly, Applicants respectfully request the Examiner withdraw the rejection.

Claim 23

Claim 23 recites

23. An apparatus, comprising:
a base including a plurality of first recesses and a plurality of first seals each extending along a perimeter of one of the first recesses, wherein each of the first recesses and the first seal therein are collectively configured to cooperate to receive and orient a corresponding one of a plurality of package substrates; and
a body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact:
the first seal of a corresponding one of the first recesses; and
a corresponding one of the package substrates received by the corresponding first recess and first seal.

Claim 23 is also not anticipated under 35 U.S.C. §102(b) by Odashima. For example, among other elements of claim 23, Odashima does not disclose a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact: (1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the corresponding first recess and first seal, in the context of claim 23.

Rejections Under 35 U.S.C. §103: Odashima

Claim 1

Claims 7 and 8 were rejected under 35 U.S.C. §103 as being unpatentable over Odashima. Applicants traverse this rejection on the grounds that Odashima is defective in establishing a *prima facie* case of obviousness with respect to claim 1.

As the PTO recognizes in MPEP § 2142:

... The Examiner bears the initial burden of factually supporting any prima facie conclusion of obviousness. If the Examiner does not produce a prima facie case, the Applicant is under no obligation to submit evidence of nonobviousness...

It is submitted that, in the present case, the Examiner has not factually supported a *prima facie* case of obviousness because Odashima does not teach the claimed subject matter.

As provided in 35 U.S.C. §103:

A patent may not be obtained ... if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which the subject matter pertains ... (Emphasis added)

Thus, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, in the context of claim 1, Odashima fails to teach assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a

body having a second seal, such that the second seal contacts both the first seal and the package substrate, among other elements of claim 1. Therefore, it is impossible for Odashima to render obvious the subject matter of claim 1, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 1.

Claim 11

Claims 17 and 18 were also rejected under 35 U.S.C. §103 as being unpatentable over Odashima. Applicants traverse this rejection on the grounds that Odashima is defective in establishing a *prima facie* case of obviousness with respect to claim 11.

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, in the context of claim 11, Odashima fails to teach a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, among other elements of claim 11. Therefore, it is impossible for Odashima to render obvious the subject matter of claim 11, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 11.

Claim 23

Claim 23 also cannot be rejected under 35 U.S.C. §103 as being unpatentable over Odashima. That is, as described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, among other elements of claim 23, Odashima does not disclose a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact: (1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the corresponding first recess and first seal, in the context of claim 23. Therefore, it is impossible for Odashima to render obvious the subject matter of claim 23, as a whole, and the explicit terms of §103 cannot be met.

Rejections Under 35 U.S.C. §103: Odashima in view of Ota

Claim 1

Claim 3 was rejected under 35 U.S.C. §103 as being unpatentable over Odashima in view of Japanese reference JP402038303A to Ota, et al. ("Ota"). Applicants traverse this rejection on the grounds that the combination of Odashima and Ota is defective in establishing a *prima facie* case of obviousness with respect to claim 1, for the following mutually exclusive reasons.

1. Even when combined, Odashima and Ota do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, neither Odashima nor Ota teaches assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate, among other elements of claim 1. Therefore, it is impossible for the combination of Odashima and Ota to render obvious the subject matter of claim 1, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 1.

2. The combination of Odashima and Ota is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Ota cannot be applied to reject claim 1 under 35 U.S.C. §103. The MPEP provides in §2142 that:

...the Examiner must step backward in time and into the shoes worn by the hypothetical 'person of ordinary skill in the art' when the invention was unknown and just before it was made.....The Examiner must put aside knowledge of the Applicant's disclosure, refrain from using hindsight, and consider the subject matter claimed 'as a whole'.

Here, neither Odashima nor Ota teaches, or even suggests, the desirability of the combination since neither teaches assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate, among other elements of claim 1.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 1.

In this context, the MPEP further provides at §2143.01:

The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination.

In the above context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination arises solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 1. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 1.

Claim 11

Claim 13 was also rejected under 35 U.S.C. §103 as being unpatentable over Odashima in view of Ota. Applicants traverse this rejection on the grounds that the combination of Odashima and Ota is defective in establishing a *prima facie* case of obviousness with respect to claim 11.

1. Even when combined, Odashima and Ota do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, in the context of claim 11, Odashima fails to teach a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, among other elements of claim 11. Moreover, Ota fails to cure these shortcomings of Odashima. Therefore, it is impossible for the combination of Odashima and Ota to render obvious the subject matter of claim 11, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 11.

2. The combination of Odashima and Ota is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Ota cannot be applied to reject claim 11 under 35 U.S.C. §103. That is, neither Odashima nor Ota teaches, or even suggests, the desirability of the combination since neither teaches a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, among other elements of claim 11.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 11.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination arises solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 11. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 11.

Claim 23

Claim 23 also cannot be rejected under 35 U.S.C. §103 as being unpatentable over Odashima in view of Ota.

1. Even when combined, Odashima and Ota do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Odashima fails to teach a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact: (1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the

corresponding first recess and first seal, in the context of claim 23. Moreover, Ota fails to cure these shortcomings of Odashima. Therefore, it is impossible for the combination of Odashima and Ota to render obvious the subject matter of claim 23, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 23.

2. The combination of Odashima and Ota is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Ota cannot be applied to reject claim 23 under 35 U.S.C. §103. That is, neither Odashima nor Ota teaches, or even suggests, the desirability of the combination since neither teaches a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact: (1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the corresponding first recess and first seal, in the context of claim 23.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 23.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 23. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 23.

Rejections Under 35 U.S.C. §103: Odashima in view of Peterson

Claim 1

Claim 5 was rejected under 35 U.S.C. § 103 as being unpatentable over Odashima in view of U.S. Patent No. 6,612,175 to Peterson, et al. ("Peterson"). Applicants traverse this rejection on the grounds that the combination of Odashima and Peterson is defective in establishing a *prima facie* case of obviousness with respect to claim 1, for the following mutually exclusive reasons.

1. Even combined, Odashima and Peterson do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, neither Odashima nor Peterson teaches assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate, among other elements of claim 1. Therefore, it is impossible for the combination of Odashima and Peterson to render obvious the subject matter of claim 1, as a whole, and the explicit terms of § 103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 1.

2. The combination of Odashima and Peterson is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Peterson cannot be applied to reject claim 1 under 35 U.S.C. § 103. That is, neither Odashima nor Peterson teaches, or even suggests, the desirability of the combination since neither teaches assembling a bifurcated mold around device and package substrates, wherein the bifurcated mold includes a base having a first seal and a body having a second seal, such that the second seal contacts both the first seal and the package substrate, among other elements of claim 1.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. § 103 rejection of claim 1.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination arises solely

from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 1. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 1.

Claim 11

Claim 15 was also rejected under 35 U.S.C. §103 as being unpatentable over Odashima in view of Peterson. Applicants traverse this rejection on the grounds that the combination of Odashima and Peterson is defective in establishing a *prima facie* case of obviousness with respect to claim 11.

1. Even combined, Odashima and Peterson do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, in the context of claim 11, Odashima fails to teach a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, among other elements of claim 11. Moreover, Peterson fails to cure these shortcomings of Odashima. Therefore, it is impossible for the combination of Odashima and Peterson to render obvious the subject matter of claim 11, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 11.

2. The combination of Odashima and Peterson is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Peterson cannot be applied to reject claim 11 under 35 U.S.C. §103. That is, neither Odashima nor Peterson teaches, or even suggests, the desirability of the combination since neither teaches a first seal coupled to a base, and a second seal coupled to a body, wherein the second seal is configured to contact the first seal and a package substrate when device and package substrates are coupled together and oriented within the base and the body, among other elements of claim 11.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 11.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination arises solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 11. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness has clearly not been met with respect to claim 11.

Claim 23

Claim 23 also cannot be rejected under 35 U.S.C. §103 as being unpatentable over Odashima in view of Peterson.

1. Even combined, Odashima and Peterson do not teach the claimed subject matter

As described above, when evaluating a claim for determining obviousness, all limitations of the claim must be evaluated. However, Odashima fails to teach a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact: (1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the corresponding first recess and first seal, in the context of claim 23. Moreover, Peterson fails to cure these shortcomings of Odashima. Therefore, it is impossible for the combination of Odashima and Peterson to render obvious the subject matter of claim 23, as a whole, and the explicit terms of §103 cannot be met.

Thus, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 23.

2. The combination of Odashima and Peterson is improper

There is another mutually exclusive and compelling reason why the combination of Odashima and Peterson cannot be applied to reject claim 23 under 35 U.S.C. §103. That is, neither Odashima nor Peterson teaches, or even suggests, the desirability of the combination since neither teaches a base and a body, the body including a plurality of second recesses and a plurality of second seals each extending along a perimeter of one of the second recesses, wherein each of the second seals is configured to contact:

(1) the first seal of a corresponding first recess of the base; and (2) a corresponding package substrate received by the corresponding first recess and first seal, in the context of claim 23.

Thus, it is clear that neither reference provides any incentive or motivation supporting the desirability of the combination. Therefore, there is simply no basis in the art for combining the references to support a 35 U.S.C. §103 rejection of claim 23.

In this context, the courts have repeatedly held that, absent some teaching, suggestion or incentive supporting combination, obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention. In the present case, it is clear that the Examiner's combination can arise solely from hindsight based on the invention and without any showing, suggestion, incentive or motivation in either reference for the combination as applied to claim 23. Therefore, for this mutually exclusive reason, the Examiner's burden of factually supporting a *prima facie* case of obviousness clearly cannot be met with respect to claim 23.

Conclusion

It is clear from all of the foregoing that independent claims 1, 11 and 23 are in condition for allowance. Dependent claims 2-10, 12-20 and 24 depend from and further limit independent claims 1, 11 and 23 and, therefore, are allowable as well.

It is believed that all matters set forth in the Office Action have been addressed, and that claims 1-20, 23 and 24 are in condition for allowance. Favorable consideration and an early indication of the allowability of the claims are respectfully requested. Should the Examiner deem that an interview with Applicants' undersigned attorney would expedite consideration, the Examiner is invited to call the undersigned attorney at the telephone number indicated below.

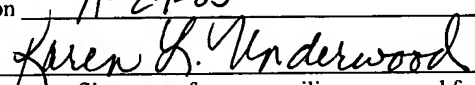
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